

NICE and its Methodology

An International Benchmark for Cost-Benefit Analysis?

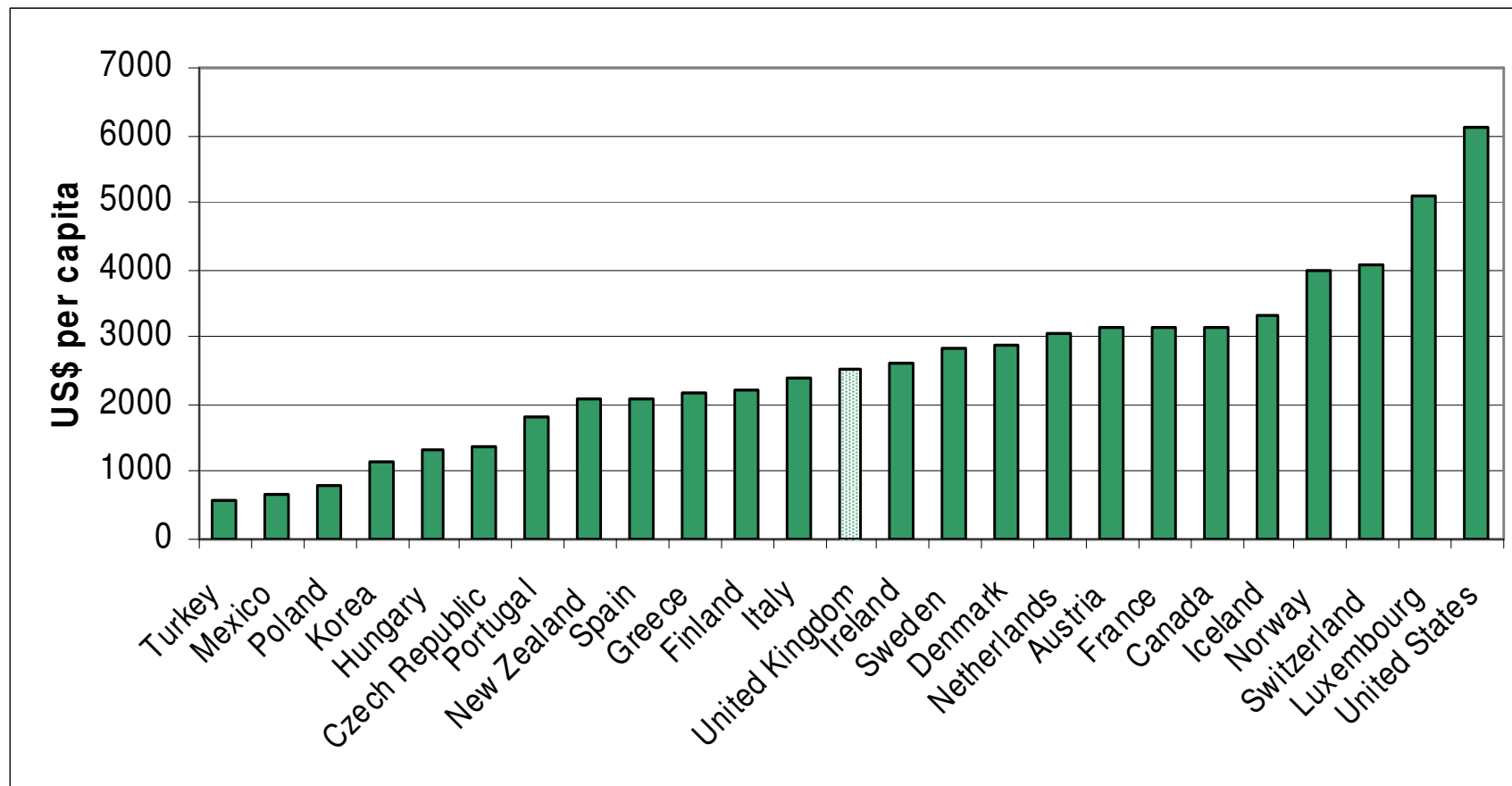
Professor Sir Michael Rawlins

Chair, National Institute for Health and Clinical Excellence, London



Healthcare expenditure

OECD data 2004



Economic evaluation

Overarching principles (for NICE):

- 1.** Economic perspective
 - NHS and PSS
 - 2.** Cost effectiveness
 - Not affordability or budgetary impact
 - 3.** Balance between:
 - Efficiency (utilitarianism)
 - Fairness (egalitarianism)
- 

Methods of evaluation

Approaches used by NICE:

1. Cost minimisation
2. Cost effectiveness analysis
3. Cost utility analysis
4. Cost ~~benefit~~ analysis

Cost minimisation


Costs for treatments of equal effectiveness:

- Oral versus intravenous treatment

Cost saving

Cost effectiveness analysis

**Effectiveness measured in “natural”
units:**

- Cost per cm additional height gained
 - Cost per additional life years gained
 - Cost per progression-free life year
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Cost utility analysis

Cost per increase in health-related
quality of life from:

- Change in the health utility
- "Time enjoyed"

■ Costs (indirect and direct)

■ Discounted at 6% per annum

Incremental cost per QALY

Utility assessment (EurQoL-5D)

Domains (each on a 3-point scale):

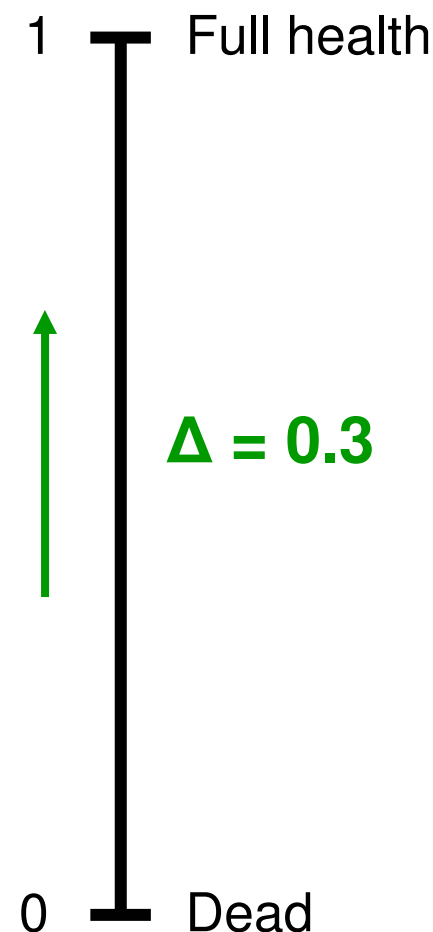
- Physical mobility
- Ability to self-care
- Ability to carry out activities of daily living
- Absence of pain and discomfort
- Absence of anxiety and depression

Expressed as a "value" (0 to 1)

An example

Hip replacement:

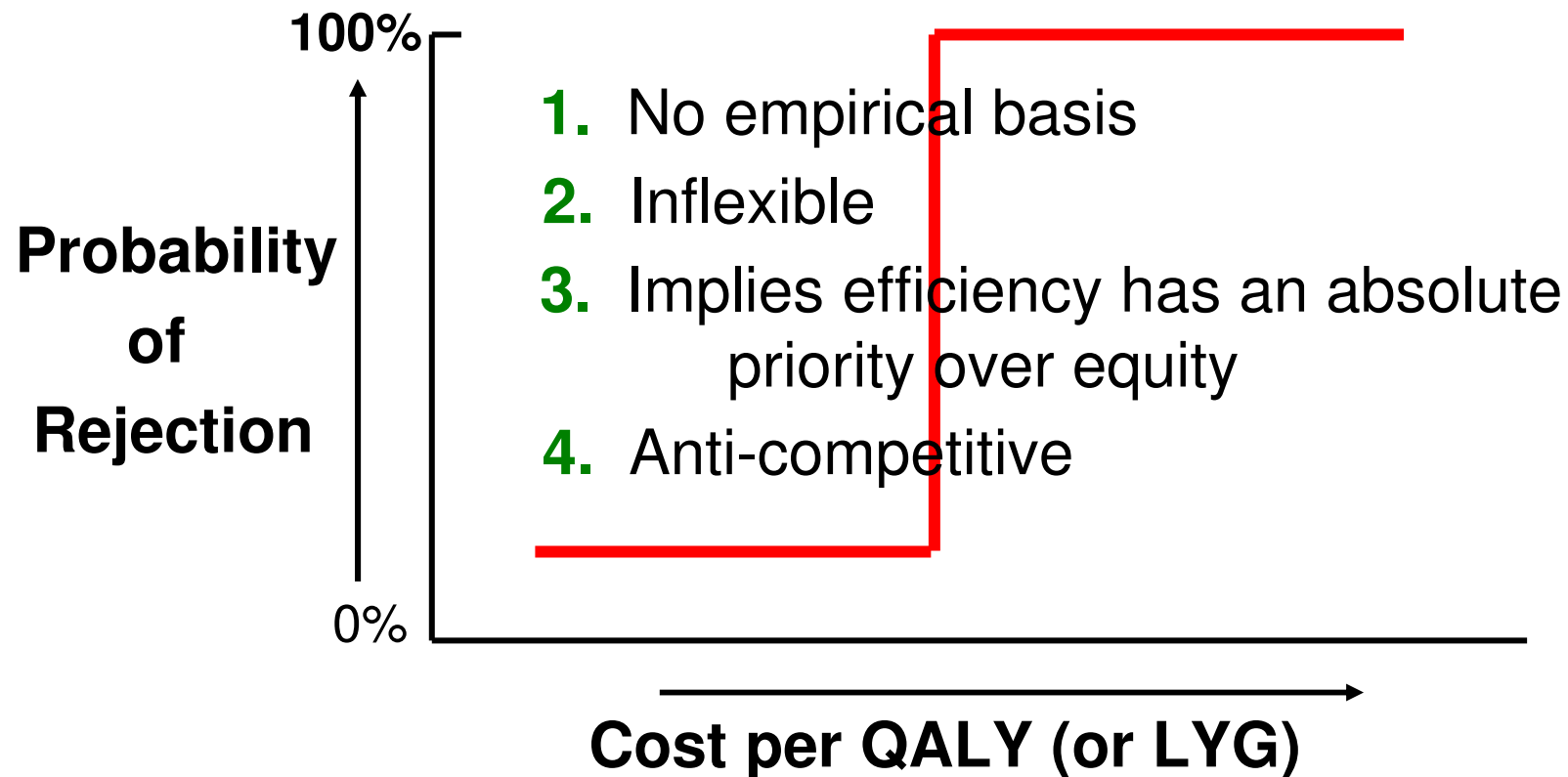
- Costs (say) £5000
- Produces 0.3 units health gain
- Lasts 20 years (6 QALYs)
- ICER = $5000 \div 6$
= 833 £ per QALY



Criticisms of CUA

1. Only healthcare related costs and benefits considered.
2. Utility instruments fail to capture relevant HR-QoL data.
3. QALYs disadvantage certain people.
4. What's the "threshold"?

Cost Ineffectiveness




ICER Thresholds

WHO definitions

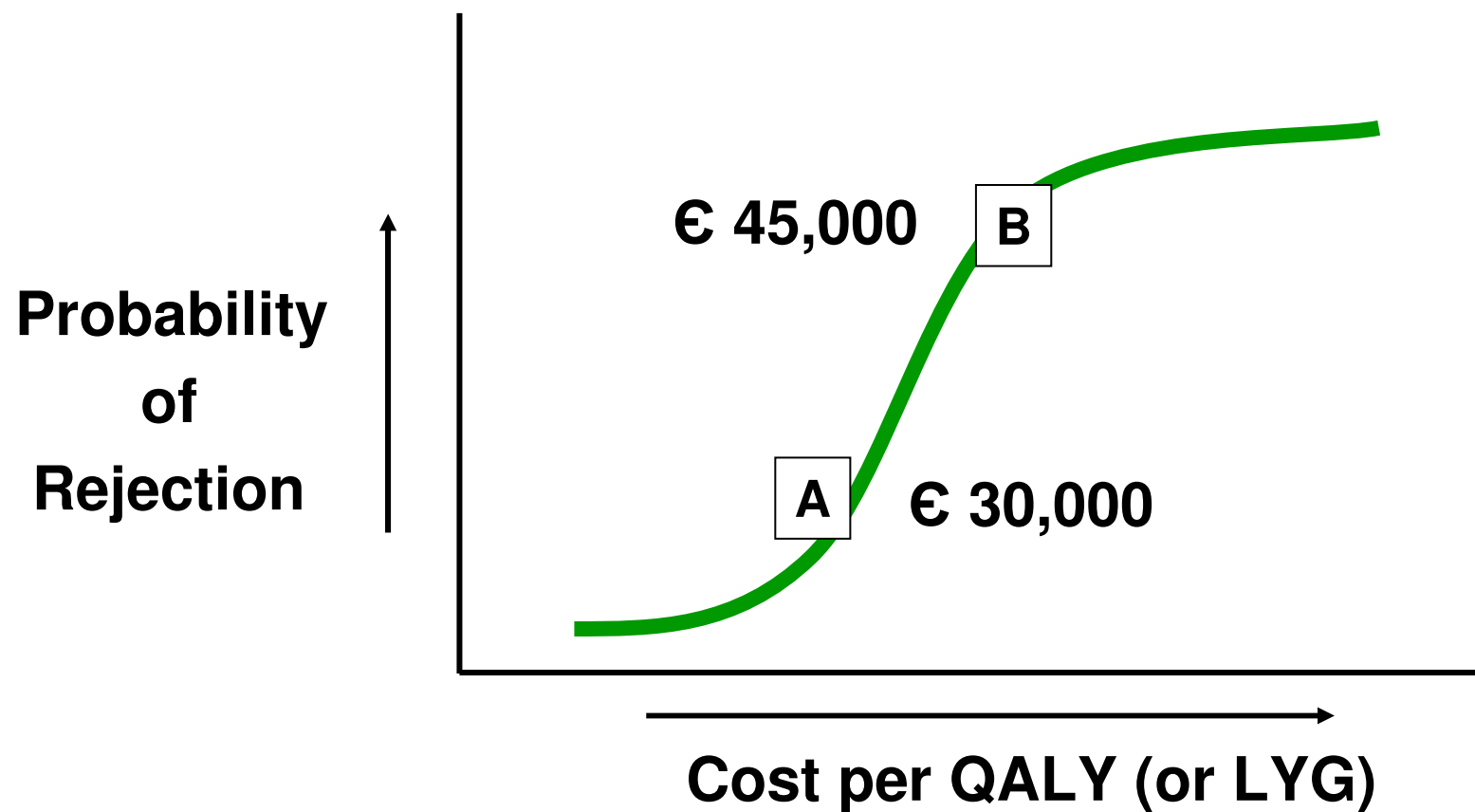
Relation to per capita GDP	Cost effectiveness
< 1	Unequivocally cost effective
>1 and <3	Possibly cost effective
>3	Unequivocally cost ineffective

Case-by-case approach

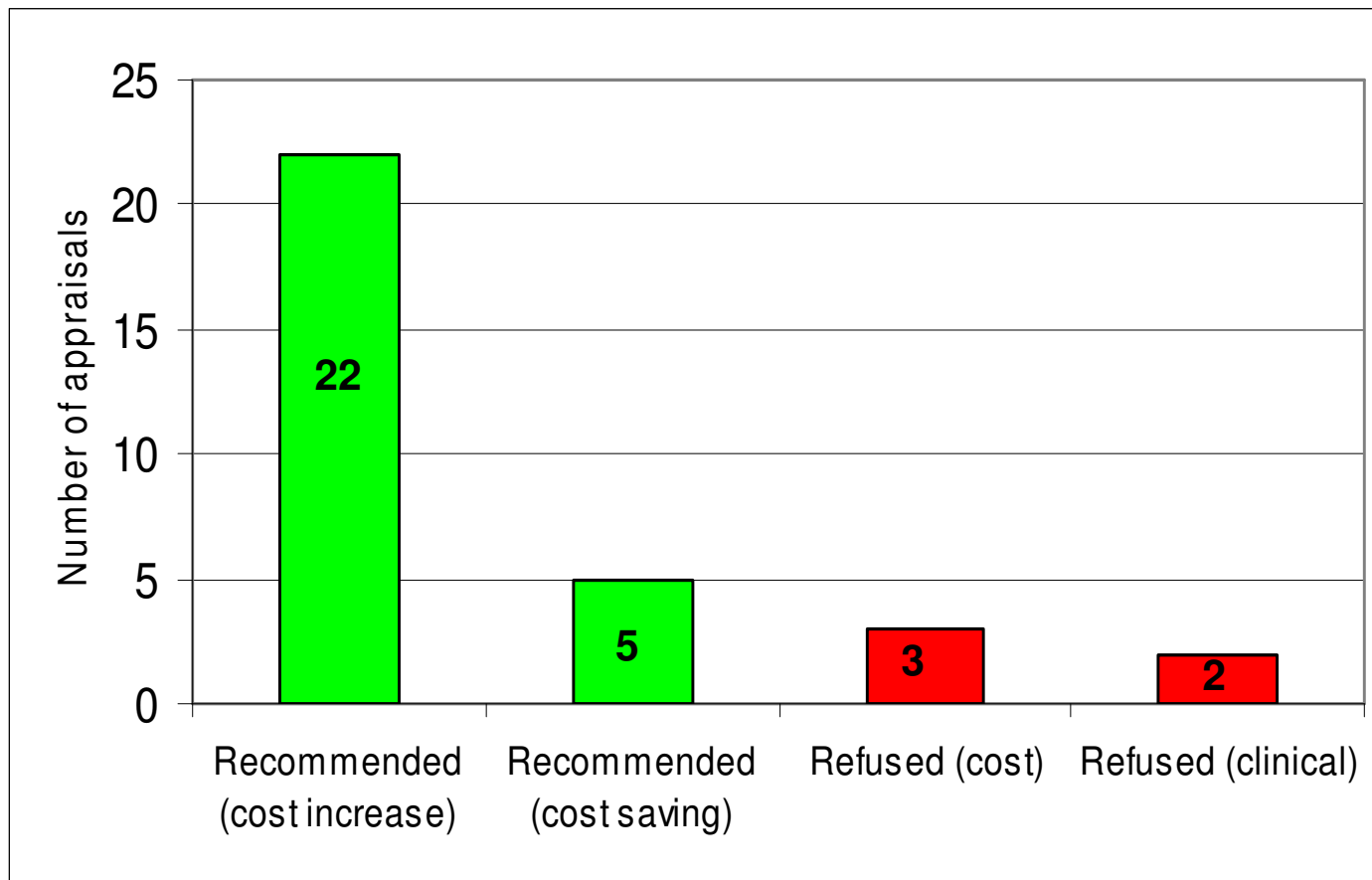
Based on:

- degree of uncertainty of the ICER
 - innovative nature of the technology
 - wider societal interests
 - reference to previous appraisals
 - special features of the condition (eg prognosis, equity issues etc)
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Cost Ineffectiveness

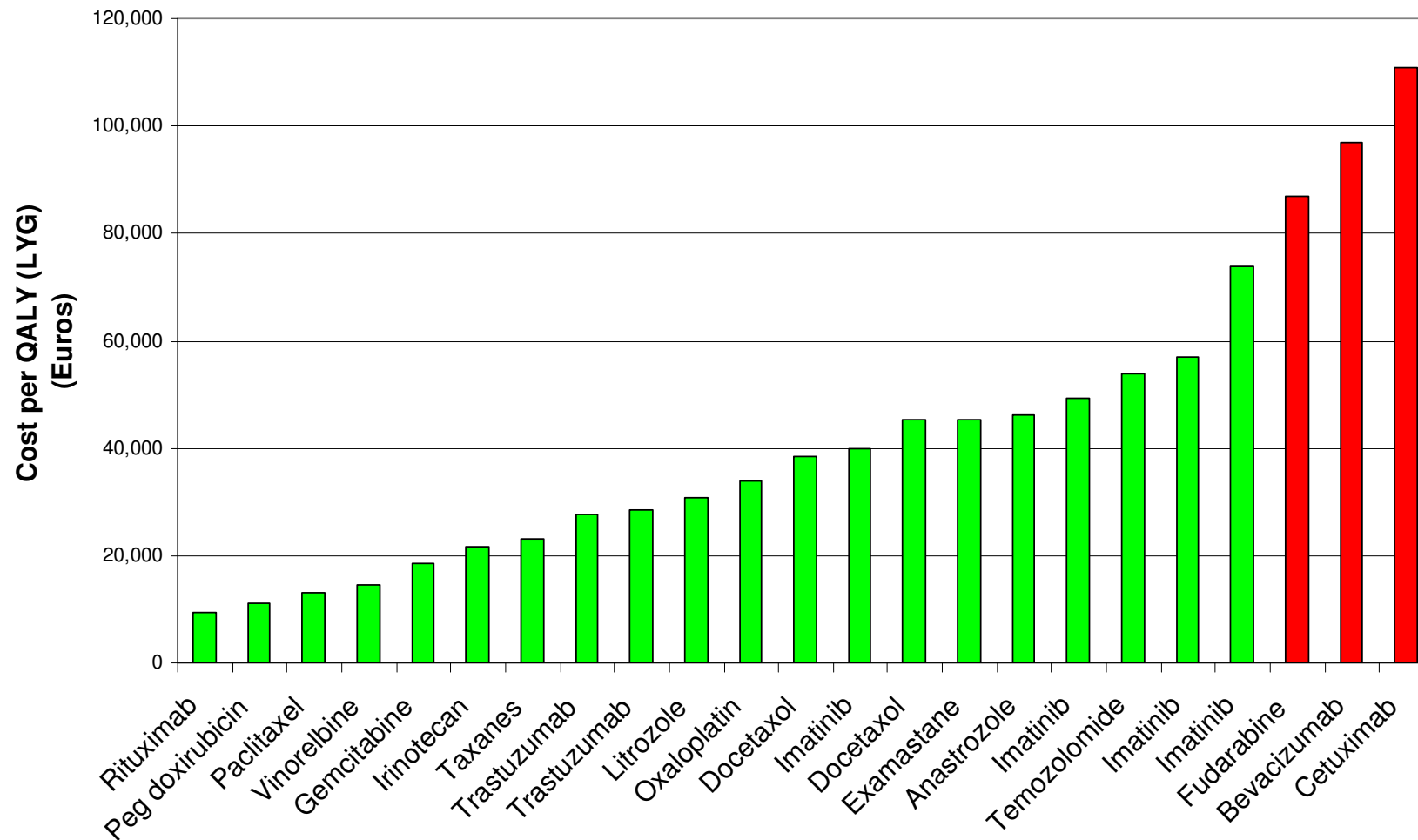


Results of anti-cancer drug appraisals



Cost effectiveness

NICE anti-cancer drug appraisals (2000 to 2007)



Conclusions

1. Cost utility analysis has imperfections.
2. It is a necessary but not sufficient - basis for decision making.
3. Reinforces need for transparency, inclusiveness and independence of decision makers.

“Le moins et l’ennemi de bien”